

Microwave Digital Link (Band 2,3-23 GHz) EDL Series

The EDL SERIES microwave digital links are designed for long and medium haul applications, STLs, backbones, multi-hop systems, and other broadcast requirements to deliver broadcast-quality ASI signal (DVB) or data flows. The radio link from 2,3 to 23 GHz are made in two single 1-unit rack that permit a fast and easy integration with existing telecommunications systems in the full respect of the levels, of the modulations and of the impedance. The radio links are composed by two units; an indoor unit SHF (IDU-SHF) (optionally outdoor unit ODU in aerial head) supplied in a single 1-unit rack containing the RF Transmitter (or RF Receiver) and a second indoor unit LF (IDU-LF) supplied in a single 1-unit rack containing mo/demodulator (QPSK or 16QAM MO/DEM) and co/decoder (MPEG2 CO/DEC + MUX).

They have a colour display placed on the front panel where the information about the functions of each board, the video signals in input and output to CODEC MPEG2 can be easily checked out.

The Mainframe offers a completely new flexible and modular platform; all boards are inside the device and are automatically identified by the operative system. The power supply section can receive either alternate or continue tension (even if they are simultaneously); furthermore it can be removed completely (from its location) together with the switch on button to permit easy maintenance.

The program of the function can be done, either pressing on the keyboard, or from remote placements thanks to an interface Ethernet 10 /100 base T which allows a remote link also through web. Two other serial interfaces RS 232 and six relè contacts complete the interfaces.

The excellent spectral purity of the conversion oscillators endows these units with an excellent signal/ noise ratio in both transmission and reception.



- > Reduced dimensions
- > Mains & battery-fed power supply
- > AGC controls
- > Available in mono-or bidirectional version
- > Excellent noise figure
- > Low power consumption

EDL 1011-30

EDL 1214-30

1 W Digital Link, freq. 10.3-10.7 Ghz (TS ASI in/out)

1 W Digital Link, freq. 12-14 Ghz (TS ASI in/out)

Technical data

FREQUENCY

Modulation, Type	QPSK, 16 QAM
Range	Microwave Band: 2.3 - 23 GHz
System Capacity	ASI /E3 G703 (with optional de/coder one video plus two audio signals)
Output Frequency Stability	± 10 p.p.m. or better (synthesized version)
I.F. Frequency	70 MHz +/- 5 KHz
I.F. I/O Level / Impedance	From - 25 to 0 dBm in step 0,1 dBm / 75 Ohm BNC connector
I.F. I/O Return loss	> 26 dB
Output connector / Impedance	Waveguide connector (or N female / 50 Ohm on request)

RECEIVER

Dynamic range	> 50 dB
Noise figure weighted	Better then 5 dB at - 40 dBm
33 dB S/N Threshold	-86 dBm
Rejection @ 70 Mhz (Band pass filter)	60 dB
Return loss (Band pass filter)	26 dB minimum

QPSK DE/MODULATOR- 16 QAM DE/MODULATOR

Mode:	QPSK - ETS 300 421 (DVB-S) 16 QAM - ETS 301 210
FEC (code rate)	Viterbi 1/2, 2/3, 3/4, 5/6, 7/8 selectable
Outer code	Reed Solomon (188 204)
Payload	From 3 to 45 Mbits/s on 500 Kb/s steps
Selectable roll off	0,15 - 0,55 in 0,05 steps
I.F. bandwidth	1.75 to 28 MHz (software selectable)
Data scrambling	X15+X14+1

DE/CODER MPEG 2 (OPTIONAL)

Video Input	Analogue PAL composite, 1 Vpp 75 Ohm, BNC connector
Video encoding standards	ISO / IEC 13818-2 MP@ML (MPEG-2 4:2:0)
Picture type I, P, B	Horizontal: up to 720 pixel in 32 pixel steps Vertical PAL up to 576 pixel in 32 pixel steps
Supported resolution	Full D1, 3/4 D1. 2/3 D1, HD1, SIF
Audio encoding standards	Analogue two channel, 0 dBm 600 Ohm, BNC connector
Audio encoding standards	ISO / IEC 11172-3 (MPEG-1 audio) layer 1/2 compliant
Sampling frequency	32 KHz, 44,1 KHz, 48 KHz
Bit rate	Video 0,8 - 14 Mb/s Audio max 384 kb/s
Stream type	Transport Stream on ASI interface
Stream multiplexing standards	ISO / IEC 13818-1 (MPEG-2) PAT table
System Bit rate	Up to 45 Mb/s on 100 Kbit steps

INTERFACES

Parallel	Remote signals and controls with floating contacts
Others	TCP/IP Web server via Ethernet 10/100 base Tt

TEMPERATURE

Operating temperature	From -5°C to + 40°C (Meets ETS 300 019 requirements)
Storage temperature	From -30°C to 50°C
Maximum relative Humidity	90% max non condensing
Max Operating Altitude	2500 mt. a.s.l.

STANDARDS SATISFIED Declaration of Conformity with regards to the R&TTE Directive 1999/5/EC

POWER REQUIREMENT 110 to 220 V a.c. +/- 10% & 24 V d.c.- 30% + 20% (consumption around 30 W)

DIMENSIONS AND WEIGHT

Rack	4 x 483 mm (W) x 250 mm (D) x 44 mm (H)
Weight	4 x 5 kg
Package	Carton Case: 2 x 560 mm (W) x 460 mm (D) x 160 mm (H)
Total weight of the equipment	2 x 10 Kg. (package included)